

REMARKS

Applicants respectfully request entry of the foregoing and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. § 1.112, and in light of the remarks which follow.

Claims 21-51 are pending in the application, claims 1-20 having been canceled above, and new claims 21-51 having been added above.

By the above amendments, claims 1-20 have been canceled without prejudice to or disclaimer of the subject matter therein. New claims 21-51 have been added to further define exemplary embodiments of the claimed invention. Support for new claims 21-51 can be generally found in the specification, and more particularly at least at pages 4-6 of the specification.

Applicants thank the Examiner for acknowledging acceptance of the drawings submitted on December 5, 2001; receipt of all certified copies of the priority documents under 35 U.S.C. § 119; receipt and consideration of Applicants' PTO Form-1449 submitted on July 25, 2001; and consideration of the related search report.

Turning now to the Official Action, claims 12-20 stand withdrawn from consideration as being directed to non-elected subject matter. Although Applicants do not necessarily agree with the Examiner's position concerning the unity of invention requirement, Applicants have cancelled claims 12-20 in an effort to expedite prosecution of the application. Applicants reserve the right to file a divisional application directed to any non-elected subject matter.

Claim 1 stands objected to for an apparent typographical error. As claim 1 has now been cancelled, this objection is moot.

Claims 1-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hosaka (U.S. Patent No. 4,308,110) in view of Suda (U.S. Patent No. 3,969,420). As claims 1-11 have been cancelled above, this rejection is now moot. However, in an effort to expedite prosecution, Applicants provide the following remarks concerning newly added claims 21-51.

Claim 21, as added above, recites a process for separation and purification of a crude mixture comprising hydroquinone and resorcinol, in which process the crude mixture is first subjected to a series of distillation stages comprising: (i) subjecting the crude mixture to a distillation stage (II) designed to produce, as a distillation top product, a resorcinol-rich fraction comprising resorcinol, essentially, and hydroquinone; (ii) subjecting a distillation bottom product obtained by step (i) to a distillation stage (III) designed to produce, as a distillation top product, a hydroquinone-rich fraction comprising hydroquinone, essentially, and resorcinol; and then subjecting the hydroquinone-rich fraction and/or the resorcinol-rich fraction to a refining stage (IV or V) in order to extract the hydroquinone and/or the resorcinol, respectively, wherein the refining stage comprises successive cooling/crystallization, draining of a eutectic, reheating and draining a liquid fraction, and melting-recovering a crystallized fraction. (Emphasis added.)

With respect to original claims 1-11, the Official Action asserts that Hosaka teaches "separating and purifying a crude hydroquinone/resorcinol mixture comprising, distilling the mixture to obtain as a top distillate fraction a resorcinol-rich fraction and then distilling the bottom fraction to obtain as a top distillate fraction a hydroquinone-rich fraction." Moreover, the Official Action concludes that the only difference between the claimed invention and Hosaka is that Hosaka does not "teach

extraction of the hydroquinone and/or resorcinol from the fraction rich in either hydroquinone or resorcinol." The Official Action further asserts, however, that Suda teaches "the extraction of hydroquinone and resorcinol from a hydroquinone-resorcinol mixture." Accordingly, the Official Action concludes that it would have been obvious to combine Hosaka and Suda to arrive at the claimed invention.

Hosaka relates to a process for separation and purification of dihydric phenols, and more particularly to a process for efficiently separating resorcinol and hydroquinone from a mixture containing resorcinol and hydroquinone, and a process for separating and purifying hydroquinone from crude hydroquinone containing impurities by distillation. (See Osaka at column 1, lines 5-11.)

Suda relates to a process for recovering resorcinol and hydroquinone in mixture efficiently from a solution containing resorcinol and hydroquinone, particularly a solution resulting from cleavage of oxidation products of diisopropylbenzene with an acidic catalyst. (See Suda at column 1, lines 5-10.)

To establish a *prima facie* case of obviousness, the prior art references (or references when combined) must teach or suggest all of the claim elements. See In Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In addition, "all words in a claim must be considered in judging the patentability of that claim against the prior art." See In re Wilson, 424 F.2d 1382, 1385; 165 USPQ 494, 496 (CCPA 1970). See also M.P.E.P. § 2143.03.

First, the asserted combination of references cannot be relied upon to establish a *prima facie* case of obviousness, because the asserted combination does not disclose or suggest all of the elements of claim 21. In particular, Applicants submit that neither Hosaka nor Suda, alone or in combination, teach or suggest a

process for separating and purifying a crude mixture comprising hydroquinone and resorcinol, wherein the process includes a refining stage (IV or V) to extract the hydroquinone and/or the resorcinol, wherein the refining stage comprises successive cooling/crystallization, draining of a eutectic, reheating and draining a liquid fraction, and then melting-recovering a crystallized fraction, as recited in independent claim 21. Accordingly, Applicants submit that the combination of Hosaka and Suda fails to disclose or suggest all of the elements of claim 21.

Furthermore, the combination of Hosaka in view of Suda does not reflect a proper consideration of "all words" in the claim. In particular, because neither of the cited references discloses or suggests a process for separation and purification of a crude mixture of hydroquinone and resorcinol, including the refining stage recited in claim 21, Applicants submit that the Official Action cannot rely on the asserted combination because the asserted combination of references does not reflect a full consideration of all claim elements, i.e., patentable weight must be given to "the refining stage comprises successive cooling/crystallization, draining of a eutectic, reheating and draining a liquid fraction, and then melting-recovering a crystallized fraction," in claim 21 in judging the patentability of the claim over Hosaka and Suda.

For at least these reasons, claim 21 is patentable over the combination of Hosaka in view of Suda. Because the remaining claims (claims 22-51) depend, either directly or indirectly, from independent claim 21, Applicants submit that these claims are also patentable over Hosaka and Suda for at least the reasons that claim 21 is patentable thereover. Applicants respectfully request reconsideration and withdrawal of the rejection.

From the foregoing, Applicants earnestly solicit further and favorable action in the form of a Notice of Allowance.

If there are any questions concerning this paper or the application in general, Applicants invite the Examiner to telephone the undersigned at the Examiner's earliest convenience.

Respectfully submitted,

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